

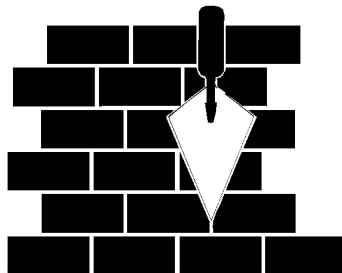


Indiana Technology Education Curriculum



Tool / Equipment Guide

2000 Edition



Tool & Equipment Guide

2000 Edition

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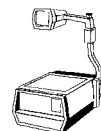
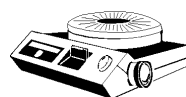
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INTRODUCTION

Technology Education facilities must be designed to support an identified curriculum. These facilities should be flexible and capable of supporting a variety of multi-disciplinary activities and experiences. The tools, equipment, and software in these contemporary facilities should be selected based upon the criteria of comprehensiveness, flexibility, and usability.

Comprehensiveness: The ability of the resources to be used to support more than one current and/or proposed future learning activity of experience (often in more than one cluster).

Flexibility: The ability of the resources to change and/or be adapted to meet the needs of students and future curriculum changes.

Usability: The ability of the resources to be used by all intended student populations to support learning through participation in selected learning activities or experiences.

Technology education equipment will commonly consist of two major classifications: (1) standard and (2) flexible. Standard equipment such as drill presses, table saws, lathes, plastic injection molding machines, sanders, etc., should be supplemented with more flexible equipment. Flexible equipment is capable of being used to support more than one task, function, process, or activity. Examples of flexible equipment include computers, work/learn centers, and flexible machining systems, etc. For the equipment to be truly flexible, it should be mobile and capable of being moved about in the learning environment, whenever practical.

Other criteria to be used in the selection and purchase of equipment include:

Simplicity: The ability of the resources to perform its intended function in the easiest manner possible (is it user friendly?).

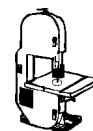
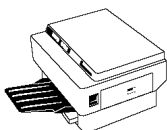
Serviceability: The ability of an identified tool or piece of equipment to be easily maintained in-house or such that factory service is readily available.

Compatibility: The ability of the resources to be adaptable to and to be safely used with other components or pieces of equipment.

Durability: The ability of tools and equipment to perform its intended task with minimum failure in normal use.

Cost effectiveness: The ability of the resources to support selected content and learning activities economically.

Selection of equipment for Technology Education facilities should begin early in the total planning process. The time spent in the proper identification and selection of the best equipment will not only improve the planning process, but enhance the understanding of the curriculum



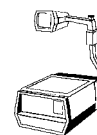
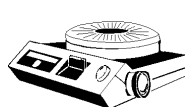
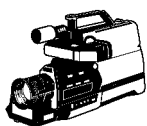
and selected activities. Questions such as type, size, number, safety, etc., will best be answered by analyzing needs based on the curriculum and the intended learning activities and experiences.

The tool, equipment, and software lists provided in this publication are intended to be only basic recommendations and are not all encompassing. There are two basic reasons for this. The first is the *Indiana Technology Education Curriculum Guides* themselves. They are what their name implies . . . curriculum guides. Many individual decisions and choices are in the hands of the school system and the classroom teacher. These individual decisions will govern the selection of learning activities, and thus all equipment choices. The second is that this list only identifies **major equipment**. Small tools such as hammers and screw drivers are not included. However, when a large number of specialty hand tools (such as masonry tools) are required, they will be identified.

The Indiana Technology Education equipment list is divided into five major parts: Communication, Construction, Manufacturing, Transportation, and Advanced (i.e., Applications Level) Courses. There are subheadings in each area that identify the courses with which the list deals. Technology, which, is the Middle School/Junior High School course is always in the left column. The high school courses are the other columns. There are four pieces of information in each equipment list. They include:

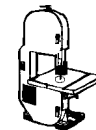
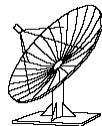
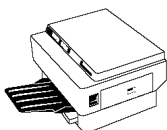
1. **ITEM** — The name or description given to each identified item.
2. **QUAN** — The recommended quantity or number of items required. (Note: The number and type of recommended items will depend upon projected and proposed activities, class size, number of identified sections, and courses to be offered. In this guide, it is assumed the average class size is 20 students . . . so the quantities correspond to that class size.)
3. **NEED** — The Items marked “R” are required to teach a good technology-based program while the items with an “S” are supplemental and help extend the course.
4. **NUMBER** — After the letter “R” or “S” there is a number to correspond to the number of recommended items to support a Technology program.

The items in this equipment list were selected based upon their ability to support recommended activities in the *Indiana Technology Education Curriculum Guides*. Curriculum and equipment alone will not make a successful Technology Education program. A “Transition Plan” or “Plan for Implementation” should be developed to insure that **all elements** in the program are prepared to implement the technology-based curriculum. This plan should include elements such as: an implementation time line, teacher in-service, any internal and external public relations programs, presentations to key administrators and the school board, identification of required facility modifications, and both a short- and long-term equipment acquisition plan.

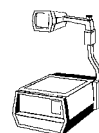
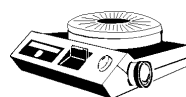


COMMUNICATION COURSES

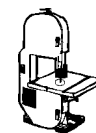
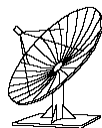
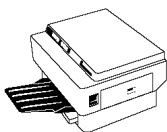
Item	Technology	Communication Systems	Communication Process	
Teacher's Desk	R1	R1	R1	
Projection Screen	R1	R1	R1	
Projector Table	R1	R1	R1	
Magazine Rack	S1	S1	S1	
Multiple Hole Punch	R1	R1	R1	
Display Cabinet	R1	R1	R1	
Overhead Projector	R1	R1	R1	
Slide Projector	R1	R1	R1	
Magnetic Planning Board	S1	S1	S1	
Teacher's Lectern	R1	R1	R1	
Stapler	R1	R1	R1	
Filing Cabinets	R2	R2	R2	
Computer Tables	R8	R8	R8	
Planning Tables with Chairs/2	R10	R10	R10	
Handout Storage Cabinets	R1	R1	R1	
Thermal Processor/Copier	R1	R1	R1	
Portable Dwg. Boards w/T-squares	R20	R20	R20	
Assorted Drafting Instruments	R20	R20	R20	
[Kraft] Paper Dispenser	R1	R1	R1	
Parts Cabinets	S1	S1	S1	
Activity Storage Cabinets (with tote trays)	R1	R1	R1	
Material Storage Cabinets	R2	R2	R2	
Service Carts	R1	R1	R1	
Worktables	R8	R8	R8	
24" Stools w/Adjustable Backs	S20	S20	S20	
Wall [Tool] Cabinets	R2	R2	R2	
Mobile Material and Activity Carts	R3	R3	R3	



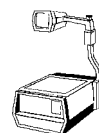
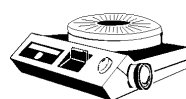
Item	Technology	Communication Systems	Communication Process	
Portable Wet/Dry Shop Vacs	S1	S1	S1	
Portable Light Tables	R3	R4	R4	
Appropriate Size/Weight/Volume Measuring Equipment	R1	R1	S1	
Heavy Duty Extension Cords	R4	R5	R5	
Appropriate Safety Equipment	R . . .	R . . .	R . . .	
Safety Glasses with Cabinet	R1	R1	R1	
First Aid Kit	R1	R1	R1	
Fire Extinguishers	R3	R3	R3	
Flammable Material Storage Cab.	R1	R1	R1	
Waste Cans [for rags]	R1	R1	R1	
Protective Gloves	S5	S5	S5	
Microcomputers w/accessories	R10	R10	R10	
Laser Printer	R4	R4	R4	
Color Ink Jet Printer	R3	R5	R5	
Scanner	S1	R4	S4	
Video Digitizer	R1	R1	R1	
Internet Connections	R5	R5	R5	
Spread Sheet Software*	R1	R1	R1	
Word Processing Software*	R1	R1	R1	
Graphics Software*	R1	R1	R1	
Clip Art (Diskette or CD-ROM)*	R1	R1	R1	
Draw/Sketch Software*	R1	R1	R1	
Dictionary Software*	R1	R1	R1	
Font Software*	R1	R1	R1	
Desktop Publishing Software*	R1	R1	R1	
Poster and Sign Software*	R1	R1	R1	
Newspaper/Bulletin Software*	R1	R1	R1	
* Number of items per station				



Item	Technology	Communication Systems	Communication Process	
Specialty computer software (Photoshop, Web Page Design, Sound Edit, etc.)	S3	R5	R5	
Air Brush System	R1	R3	R3	
35mm Cameras	S6	R6	R6	
Studio Lights	S3	R3	R3	
Digital cameras	S1	R4	R4	
Tripods	S2	R2	R2	
Color Pattern Generator	S1	S1	S1	
Color Photographic Enlargers	0	R2	0	
Black & White Photo Enlargers	S3	R3	0	
Print Washer	S1	R1	R1	
Safelights	S4	R4	R4	
Enlarging Easels	S3	R3	0	
Photographic Timers	S4	R4	R4	
Photographic Light Source	S1	R1	R1	
Photo Print Cutter	S1	R1	R1	
Paper Cutter	S1	R3	R3	
Darkroom Sink	S1	R1	R1	
Bulk Film Loader	S2	R4	R4	
Paper Safe Holder	S2	R4	R4	
Contact Frame and Lamp	S2	R2	R2	
Light Tables	S1	R6	R6	
Process Camera	0	S1	S1	
Paper Plate Maker	0	R1	R1	
PMT Processor	0	R1	R1	
Master Converter for Electrostatic Plate Maker	0	R1	R1	
Diffusion Transfer Processor	0	R1	R1	
Tabletop Contact Plate Maker	0	R1	R1	



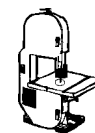
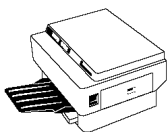
Item	Technology	Communication Systems	Communication Process	
Offset Press w/accessories	0	R1	R2	
Screen Process Printing Kit	R3	R4	R4	
Screen Process Printing Rack	R1	R1	R1	
Photocopier (w/enlargement)	R1	R1	R1	
24" Paper Cutter	R1	R3	R3	
Hand Saddle Stapler	0	R1	R1	
Paper Folder	0	R1	R1	
Padding Press	0	R1	R1	
Paper Jogger	0	R1	R1	
Film Cabinet	0	R1	R1	
Film Cutter	0	R1	R1	
Electrical [Hand] Tools	S1	S1	R1	
Transistor Tester	S1	S1	R1	
Capacitor Substitution Box	S1	S1	R1	
Resistance Substitution Box	S1	S1	R1	
Small Parts Cabinet	S1	S1	R1	
Radio Trainer	S1	S4	R4	
Laser Communication Kit	S1	S1	R1	
Microwave Trainer	0	R1	R1	
Electronic Communications Technology Trainer	0	R1	R1	
Video Recorders/Cameras	R2	R2	R2	
Video Monitors	R2	R2	R2	
Video Equipment Cart	R2	R2	R2	
Audio Recorder w/accessories	R1	R1	R1	
Hi-Speed Audio Tape Duplicator	R1	S1	R1	
Audio mixer	S1	R1	R1	
Microphone, Cordless	R1	R2	R2	
Microphone, Directional	0	S1	R1	
Oscilloscope	S1	R4	R4	



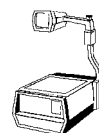
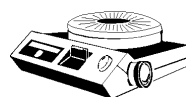
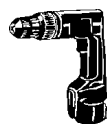
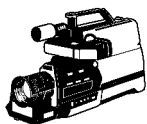
Item	Technology	Communication Systems	Communication Process	
Multi-meters	R3	R4	R4	
Power Supply (AC/DC)	R3	R3	R3	
Signal Generator	R1	R1	R1	
Frequency Counter	0	R1	R1	
Audio Generator	R1	R1	R1	
Sound Level Mixer	R1	R1	R1	
Fiber Optics Kit	R1	R1	R1	
Miscellaneous Hand Tools & Cabinet	R1	R1	R1	
Electric Power Reels (110V O.H.)	R4	R4	R4	
DVD Player	0	S1	S1	
Satellite Dish	0	S1	S1	

CONSTRUCTION COURSES

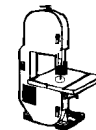
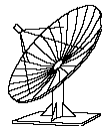
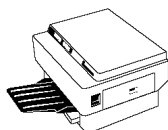
Item	Technology	Construction Systems	Construction Processes	
Teacher's Desk	R1	R1	R1	
Projection Screen	R1	R1	R1	
Projector Table	R1	R1	R1	
Multiple Hole Punch	R1	R1	R1	
Overhead Projector	R1	R1	R1	
Teacher's Lectern	R1	R1	R1	
Stapler	R1	R1	R1	
Filing Cabinets	R1	R1	R1	
Computer Tables	R8	R10	R10	
Planning Tables with Chairs/2	R10	R10	R10	
Handout Storage Cabinets	R1	R1	R1	



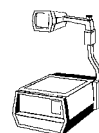
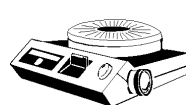
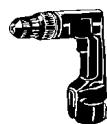
Item	Technology	Construction Systems	Construction Processes	
Portable Dwg. Bds. w/T-squares	R20	R20	R18	
Assorted Drafting Instruments	R20	R20	R20	
[Kraft] Paper Dispenser	R1	R1	R1	
Parts Cabinets	S1	S1	S1	
Activity Storage Cabinets	R1	R1	R1	
Activity Storage Cabinets (with tote trays)	R1	R1	R1	
Material Storage Cabinets	R2	R2	R2	
Service Carts	R1	R1	R1	
Worktables	R8	R8	R8	
24" Stools w/Adjustable Backs	S20	S20	S20	
Wall [Tool] Cabinets	R2	R2	R2	
Mobile Material and Activity Carts	R3	R3	R3	
Portable Wet/Dry Shop Vacs	R4	R4	R4	
Weight/Volume Measuring Equip.	R1	R1	R1	
Heavy Duty Extension Cords	R4	R4	R4	
Appropriate Safety Equipment	R . . .	R . . .	R . . .	
Safety Glasses with Cabinet	R25	R25	R25	
Hearing Protection with Cabinet	R4	R8	R8	
First Aid Kit	R1	R1	R1	
Fire Blanket	R1	R1	R1	
Fire Extinguishers	R4	R4	R4	
Flammable Material Storage Cab.	R1	R1	R1	
Waste Cans (for rags)	R1	R1	R1	
Protective Gloves	R5	R10	R10	
Face Shields	R4	R6	R6	
Microcomputers w/accessories	R5	R5	R5	
Laser Printers	R4	R4	R4	
Color Inkjet Printer and/or Plotter	R1	R5	R5	
Internet Connections	R5	R5	R5	



Item	Technology	Construction Systems	Construction Processes	
Spread Sheet Software*	R	R	R	
Word Processing Software*	R	R	R	
Graphics Software*	R	R	R	
Specialty Architectural Software*	R	R	R	
CAD Software*	R	R	R	
Portable Electric Circular Saws	0	R2	S2	
Portable Electric Saber Saw	R2	R2	S2	
3/8" Portable Electric Drills	R2	R4	S4	
1/2" Portable Electric Drills	0	S1	S1	
Battery Powered Drill	0	R4	R4	
Portable Electric Finish Sanders	R1	R3	R3	
Portable Electric Belt Sander	0	R1	R1	
Storage Units for Specialty Tools	R1	R1	R1	
Specialty Tools				
Carpentry	R1	R1	R4	
Plumbing	S1	R1	R4	
Electrical	R1	R1	R4	
Heating & Air Conditioning	0	S1	R4	
Masonry	R1	R1	R4	
Layout	0	R1	R4	
Drywall	S1	R1	R4	
Selected Floor Coverings	S1	R1	R3	
Selected Wall Coverings	S1	R1	R3	
Roofing	R1	R1	R4	
Landscaping	0	S1	R3	
Finishing	R1	R1	R4	
Concrete	0	R1	R4	
Model Making	R1	R3	R4	
* required per station				



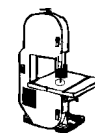
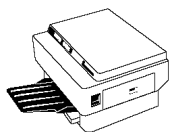
Item	Technology	Construction Systems	Construction Processes	
Belt/Disk Sander	R1	R4	R4	
Router	0	R1	R1	
10" Radial Saw	R1	R3	R3	
Motorized Miter Saw	0	R2	R2	
10" Table Saw w/extensions	0	R1	R1	
14" Band Saw	R1	R2	R2	
20" Band Saw	0	S1	S1	
Scroll Saw	R1	R2	R2	
8" Joiner	0	S1	R1	
Electric Power Reels (110V O.H.)	R4	R4	R4	
Pedestal Grinder	R1	R1	R1	
Drill Press	R1	R2	R4	
Panel Saw	0	R1	R1	
Transit & Tripod	0	R1	R1	
Mortar Pan	S1	R2	R2	
Concrete Mixer	0	S1	S1	
Hand Truck	S1	R1	R1	
Step Ladder - 8"	S1	R2	R2	
Extension Ladder - 16"	0	S1	R1	
Wheelbarrow	0	R1	R1	
Stock Cart	R1	R1	R1	
Elect/Plumber's Hole Saw Set	0	R1	R1	
Water and Air Hose Reels	0	R1	R1	
Recoil Air Hose (25')	R1	R1	R1	
Construction Wiring Trainer	0	R1	R1	
Electronic Leak Tester	0	S1	S1	
Pipe Hickey/Handle	0	S1	S1	
Digital Volt-Ohm Meter	0	R2	R2	
Portable Air Compressor	0	S1	S1	
Power Nailer	S1	R2	R4	



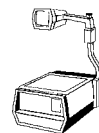
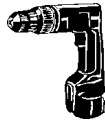
Item	Technology	Construction Systems	Construction Processes	
Power Stapler	S1	R2	R2	
Arc Welder	0	S1	S1	
Sheet Metal Bench with Equip.	S1	R1	R1	
Dust Collection System	R1	R1	R1	
Tote Trays and Cabinet	R80	R80	R80	
Clamps				
Bar	R5	R15	R15	
C-Clamps	R10	R15	R15	
Parallel Jaw	R10	R15	R15	
Quick Action	R10	R15	R15	
Spring	R10	R15	R15	
Construction Estimating Software	S1	R6	R6	
Bridge Tester	0	R1	R1	
Other (list)				

MANUFACTURING COURSES

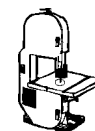
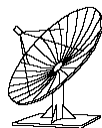
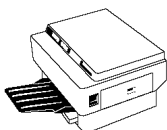
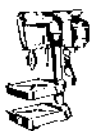
Item	Technology	Manufacturing Systems	Manufacturing Processes	Technology Enterprise
Teacher's Desk	R1	R1	R1	R1
Projection Screen	R1	R1	R1	R1
Projector Table	R1	R1	R1	R1
Magazine Rack	R1	R1	R1	R1
Multiple Hole Punch	R1	R1	R1	R1
Overhead Projector	R1	R1	R1	R1
Teacher's Lectern	R1	R1	R1	R1
Stapler	R1	R1	R1	R1
Magnet Planning Board	S1	R1	R1	R1



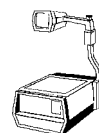
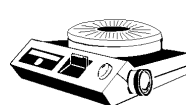
Item	Technology	Manufacturing Systems	Manufacturing Processes	Technology Enterprise
Filing Cabinets	R1	R1	R1	R1
Computer Tables	R5	R5	R5	R5
Planning Tables with Chairs	R20	R20	R20	R20
Handout Storage Cabinets	R1	R1	R1	R1
Screening Process Printing Kit	S1	R2	R2	R2
Thermal Film Processor	R1	S1	R1	R1
Photocopier	R1	R1	R1	R1
Paper Cutter	R1	R2	R2	R3
Portable Dwg Boards w/T-Square	R20	R20	R20	R20
Drafting Instruments w/templates	R20	R20	R20	R20
[Kraft] Paper Dispenser	R1	R1	R1	R1
Parts Cabinets	R1	R1	R1	R1
Activity Storage Cabinets	R5	R5	R5	R5
Material Storage Cabinets	R2	R2	R2	R2
Standard Workbenches	R4	R4	R4	R4
Long Workbenches	R2	R2	R3	R3
4" Bench Risers	R2	R2	R1	R1
Metalworking Vises	R3	R3	R3	R3
Woodworking Vises	R8	R8	R8	R8
Wall Cabinets (small tools, parts)	R1	R1	R1	R1
Mobile Material and Activity Carts with Tote Trays	R4	R4	R4	R4
Service Cart	R2	R2	R2	R2
Portable Wet/Dry Shop Vacs	R2	R2	R2	R2
Plastic Tape Labeler	0	S1	S1	R1
Size/Weight Measuring Equip.	R1	R1	R1	R1
Heavy Duty Extension Cords	R4	R4	R4	R4
Appropriate Safety Equipment	R	R	R	R
Safety Glasses with Cabinet	R20	R20	R20	R20
Hearing Protection with Cabinet	R2	R2	R2	R2



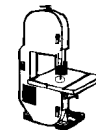
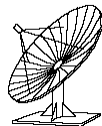
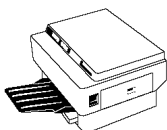
Item	Technology	Manufacturing Systems	Manufacturing Processes	Technology Enterprise
First Aid Kit	R1	R1	R1	R1
Fire Blanket	R1	R1	R1	R1
Fire Extinguishers	R2	R4	R4	R4
Flammable Material Storage Cab	R1	R1	R1	R1
Waste Cans (for rags)	R1	R1	R1	R1
Protective Gloves	R10	R16	R16	R10
Face Shields	R2	R4	R4	R4
Electric Portable Router	R1	R2	R2	R2
Router/Shaper Table	S1	R2	R2	R2
3/8" Portable Electric Drills	R2	R4	R4	R4
1/2" Portable Electric Drills	0	R1	R1	R1
Portable Electric Saber Saw	R2	R2	R2	R2
Portable Electric Belt Sander	R1	R2	R2	R2
Portable Electric Sanders	R2	R3	R3	R4
Radial Saw	R1	R2	R2	R2
14" Band Saw	R2	R2	R2	R2
20" Band Saw (combo Wood/Metal)	0	R1	R1	R1
Motorized Miter Box	R1	R2	R2	R2
Table Saw	R1	R1	R1	R1
Planer	R1	R1	R1	R1
Belt/Disk Sander	R1	R1	R1	R1
Pneumatic Drum Sander	0	R1	R1	R1
Joiner	R1	R1	R1	R1
Sander/Grinder	0	R1	R1	R1
Oscillating Spindle Sander	0	R1	R1	R1
Scroll Saw	R4	R2	R2	R2
CNC Lathe	0	S1	S1	S1
Wood Shaper w/accessories	0	S1	S1	S1
Overarm Router w/accessories	0	S1	S1	S1



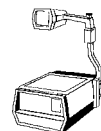
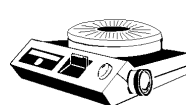
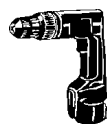
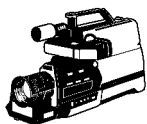
Item	Technology	Manufacturing Systems	Manufacturing Processes	Technology Enterprise
Drill Presses w/accessories	R2	R2	R4	R4
Miscellaneous Hand Tools (Wood, Metal, Plastic, and Ceramic)	R1	R1	R1	R1
Hand Held Multi-Meter (volt/ohm)	0	R1	R1	R1
Tabletop Material Processing Equipment (such as)				
Drop Forge	0	R1	R1	S1
Blanking Die	0	R1	R1	S1
Explosion Former	0	R1	R1	S1
Hydroformer	0	R1	R1	S1
Hydraulic Press	0	R1	R1	S1
Permeable Mold Casting Units	0	R1	R1	S1
Universal Testing Machine	0	R1	S1	S1
Microscope	S1	S1	S1	S1
Temperature Meter	0	R5	0	S1
Hardness Tester	0	R1	S1	S1
Tensile Tester	0	R1	S1	S1
Sand Blaster	S1	R1	S1	R1
Spray Booth	S1	R1	R1	R1
Kiln with Pyrometer	0	R1	S1	S1
Wedging Board	0	R2	R2	S1
Ceramic Sculpture Kit	0	R1	R1	R1
Ceramic Bench Tools [set]	0	R1	R1	R1
Wet Rack	0	R1	R1	S1
Drying Rack	0	R1	R1	S1
Storage Bin for Clays	0	R1	R1	S1
7" Pedestal Grinder	R1	R1	R1	R1
Spot Welder w/accessories	R1	R1	R1	R1
Sheet Metal Bench w/equipment	R1	R1	R1	R1
Soldering Furnace	0	R1	R1	S1



Item	Technology	Manufacturing Systems	Manufacturing Processes	Technology Enterprise
Soldering Bench/Hood	0	R1	R1	R1
Anvil	S1	R1	R1	S1
Arbor Press	0	R1	R1	R1
Tool Grinder	0	R1	R1	R1
Rod & Bar Bender	R1	R1	R1	R1
Horizontal Band Saw	0	R1	R1	R1
Oxygen/Acetylene Unit	0	R1	R1	S1
Portable Tank Truck - Gas Welder	0	R1	R1	S1
Welding Bench/Hood	0	R3	R1	R1
Arc Welder	0	R3	R1	R1
Metal Lathe	0	R2	R2	S1
Vertical Milling Machine	0	R1	R1	R1
Surface Grinder	0	S1	S1	S1
Plating Unit	0	R1	S1	0
Punch Press	0	R1	R1	R1
Flexible Shaft with Motor	S1	R1	R1	R1
Tap & Die Set	R1	R1	R1	R1
Notcher	R1	R1	R1	R1
Squaring Shear	R1	R1	R1	R1
Injection Molder with Molds	S2	R2	R2	R2
Vacuum Former with Patterns	R1	R1	R1	R1
Compression Molder	S1	R1	R1	R1
Hydraulic and Laminating Press	0	R1	R1	R1
Styrofoam Cutter	R4	R2	R2	R4
Expandable Bead Heater	0	R1	R1	S1
Laboratory Oven	0	R1	R1	S1
Molds (Foam, Expanding Beads, Resins, Injection, Thermoforming, etc.)	R1	R1	R1	S1
Extrusion Machine	S1	R1	R1	S1



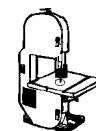
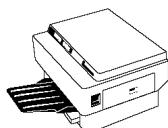
Item	Technology	Manufacturing Systems	Manufacturing Processes	Technology Enterprise
Hot Plate	R1	R1	R1	R1
Strip Heater	R1	R2	R2	R2
Rotational Molder	0	R1	R1	S1
Time Clock & Card Holder	0	0	0	R1
Pneumatic Drill Press Feed	0	S1	S1	S1
Pneumatic Clamping Cylinders	S4	R4	R4	R6
Toggle Clamps w/accessories	R8	R10	R10	R12
Recoil Air Hose	R4	R6	R6	R6
Electric Recoils (110V overhead)	R5	R5	R5	R5
Tool Cabinets with Hand Tools	R2	R2	R2	R2
Electric Screw Drivers	S2	R3	R3	R4
Electric Nailers and Staplers	S2	R3	R3	R4
Tote Trays	R20	R20	R20	R20
Conveyor Belts (12" x 6', 8', or 10')	S2	R2	R2	R4
Gravity Feed Conveyors	0	S2	S2	R2
Ball Transfer Table	0	S1	S1	S1
Heat Gun	R2	R4	R4	R4
Bag Sealer	R2	S2	S2	R2
Dust Collection System with Flexible Connections	R1	R1	R1	R1
Clamps				
Quick-Action	R8	R10	R10	R12
Air Clamping Cylinders with Valves	S8	R10	R10	R10
Bar	R10	R12	R12	R15
C-Clamps	R12	R12	R12	R15
Parallel Jaw	R12	R12	R15	R15
Spring	R8	R10	R15	R20
Band	R4	R6	R6	R12
Microcomputers w/accessories	R5	R5	R5	R5



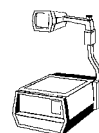
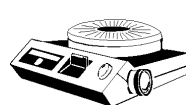
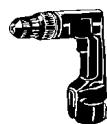
Item	Technology	Manufacturing Systems	Manufacturing Processes	Technology Enterprise
Color Inkjet Printer	R2	R2	R2	R4
Laser Printer	R2	R3	R3	R5
Internet Connections	R5	R5	R5	R5
Spread Sheet Software*	R	R	R	R
Word Processing Software*	R	R	R	R
Graphics Software*	R	R	R	R
Clip Art (Diskette or CD-ROM)*	R	R	R	R
CAD Software*	R	R	R	R
Specialty Manufacturing Software*	R	R	R	R
CNC Lathe and/or Mill	S1	R1	R1	S1
Packaging Unit	S1	R1	R1	R1
* per station				

TRANSPORTATION COURSES

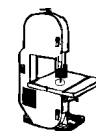
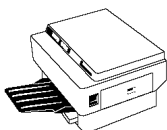
Item	Technology	Transportation Systems	Transportation Processes	
Teacher's Desk	R1	R1	R1	
Projection Screen	R1	R1	R1	
Projector Table	R1	R1	R1	
Multiple Hole Punch	R1	R1	R1	
Overhead Projector	R1	R1	R1	
Teacher's Lectern	R1	R1	R1	
Stapler	R1	R1	R1	
Filing Cabinets	R1	R1	R1	
Computer Tables	R1	R1	R1	
Planning Tables w/2 Chairs	R10	R10	R10	



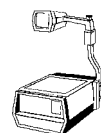
Item	Technology	Transportation Systems	Transportation Processes	
Handout Storage Cabinets	R1	R1	R1	
Portable Dwg Boards w/T-squares	R20	R20	R20	
Drafting Instruments w/templates	R20	R20	R20	
(Kraft) Paper Dispenser	R1	R1	R1	
Parts Cabinets	R1	R1	R1	
Activity Storage Cabinets	R1	R1	R1	
Activity Storage Cabinets (with tote trays)	R1	R1	R1	
Material Storage Cabinets	R1	R1	R1	
Workbenches	R4	R4	R4	
Woodworking Vises	R8	R8	R8	
Metalworking Vises	R2	R2	R2	
Service Carts	R3	R3	R3	
Wall (Tool) Cabinets	R3	R3	R3	
Mobile Material and Activity Carts	R3	R3	R3	
Portable Wet/Dry Shop Vacs	R2	R2	R2	
Filter/Regulator/Lubricators (for compressed air)	R1	R1	R1	
Weight/Volume Measuring Equip	R1	R1	R1	
Heavy Duty Extension Cords	R4	R4	R4	
Appropriate Safety Equipment	R	R	R	
Safety Glasses with Cabinet	R1	R1	R1	
Hearing Protection with Cabinet	R1	R1	R1	
First Aid Kit Fire Blanket	R1	R1	R1	
Fire Extinguishers	R4	R4	R4	
Flammable Mat'l Storage Cabinet	R1	R1	R1	
Waste Cans (for rags)	R1	R1	R1	
Protective Gloves	R8	R8	R10	
Face Shields	R4	R4	R4	



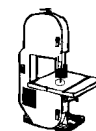
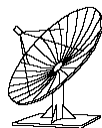
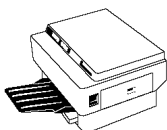
Item	Technology	Transportation Systems	Transportation Processes	
Microcomputers	R5	R5	R5	
Color Ink Jet and/or Plotter	R1	R1	R1	
Internet Connections	R5	R5	R5	
Spread Sheet Software*	R1	R1	R1	
Word Processing Software*	R1	R1	R1	
Graphics Software*	R1	R1	R1	
Clip Art (Diskette or CD-ROM)*	R1	R1	R1	
Specialty Transportation Software (Flight, Car Builder, etc.)*	R1	R1	R1	
CAD Software*	R1	R1	R1	
Power Reels (110V overhead)	R4	R4	R4	
Band Saw (combo Wood/Metal)	R1	R1	R1	
Table Saw	S1	R1	R1	
Miter Box Saw	R1	R1	R1	
Drill Press	R2	R4	R4	
Belt/Disk Sander	R1	R1	R1	
Scroll Saw	R2	R2	R2	
Sheet Metal Work Bench	R1	R1	R1	
Spot Welder	R1	R1	R1	
Wood and Metal Hand Tools	R1	R1	R1	
Arc Welder	0	S1	S1	
Welding Table	0	S1	S1	
7" Grinder	R1	R1	R1	
Power Lab Tool Package	R1	R1	R1	
Solar Cell Test Unit	R1	R1	R1	
Solar Energy Collector(s)	0	R5	R5	
Solar Trainer	R2	R2	R2	
Photovoltaic Demo Kit	0	R1	R1	
Solar Experiment Kit	R1	R1	R1	
* required per station				



Item	Technology	Transportation Systems	Transportation Processes	
Steam Turbine Test Unit	0	R1	S1	
Pulse Jet Test Unit	0	R1	S1	
Solid Fuel Test Unit	0	R1	S1	
Liquid Fuel Rocket Test Unit	0	S1	S1	
Engine Models	0	R1	R1	
Dynamometer	0	R1	R1	
4-Cycle Engines	0	R8	R8	
2-Cycle Engines	0	R6	R6	
Cox .049 air plane motor	R2	R4	R6	
Vacuum Pump	0	R1	R1	
Parts Cleaner	0	S1	S1	
Small Engine Tools	0	R5	R5	
Water Turbine	0	R1	R1	
Rocket Propulsion Kit	R6	R2	R2	
Magnet Kit	R4	R4	R4	
Galvanometer/VOM	R2	R2	R2	
Temperature Meter	R1	R1	R1	
Rocket Activity Package	R2	R2	R2	
Hot Plate	R1	R1	R1	
Wind Tunnel	0	R1	R1	
Wind Generator	0	R1	R1	
Pneumatic Work/Learn Stations	0	R4	R4	
Electronic Work/Learn Stations	0	R4	R4	
Hydraulic Work/Learn Stations	0	R4	R4	
Mechanical Work/Learn Stations	0	R4	R4	
Technology Modeling Work/Learn				
Digital Input Service Module	0	R2	R2	
Analog Input Service Module	0	R2	R2	
Digital Output Service Module	0	R2	R2	

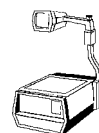
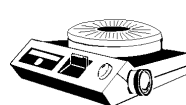
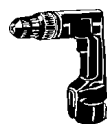
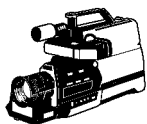


Item	Technology	Transportation System	Transportation Processes	
Robotic Exploration Kit	S4	R4	R4	
Robotic Applications Work Cell	0	R4	R4	
Sound Level Meter	0	R1	R1	
Coil & Condenser Tester	0	R1	R1	
Air Fuel Ratio Tester	0	R1	R1	
Turbo-Jet Model	0	R1	R1	
Volt/Ohm Meters	R1	R1	R1	
Electric Portable Router	R1	R1	R1	
Router Shaper Table	S1	R1	R1	
3/8" Portable Electric Drills	R2	R4	R4	
1/2" Portable Electric Drills	0	R1	R1	
Portable Electric Saber Saw	R1	R1	R1	
Portable Electric Belt Sander	R1	R1	R1	
Portable Electric Sanders	R2	R2	R2	
Clamps				
Quick-Action	R6	R6	R12	
Air Clamping Cylinders w/valves	R4	R4	R4	
Bar	R6	R6	R6	
C-Clamps	R15	R15	R15	
Parallel Jaw	R15	R15	R15	
Spring	R15	R15	R15	
Band	R4	R4	R4	
Tote Trays	R20	R20	R20	
Hot Melt Glue Gun	R10	R10	R5	
Pop Rivet Gun	R1	R1	R1	
AC Variable Transformer	S1	R1	R1	
Simulation Software*	R4	R8	R10	
* required per station				

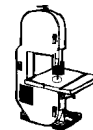
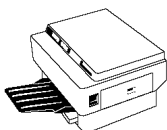


ADVANCED (DESIGN & APPLICATIONS LEVEL) COURSES

Item	Design Processes	Applications Level Courses		
Teacher's Desk	R1	R1		
Projection Screen	R1	R1		
Projector Table	R1	R1		
Magazine Rack	R1	R1		
Multiple Hole Punch	R1	R1		
Display Cabinet	R1	R1		
Overhead Projector	R1	R1		
Teacher's Lectern	R1	R1		
Slide Projector	S1	S1		
Stapler	R1	R1		
Magnet Planning Board	R1	R1		
Filing Cabinets	R1	R1		
Computer Tables	R10	R10		
Planning Tables with Chairs	R10	R10		
Handout Storage Cabinets	R1	R1		
Video Projection Unit	R1	R1		
Drawing File Cabinet	R1	R1		
Portable Dwg Boards w/T-squares	R20	R20		
Drafting Instruments w/templates	R20	R20		
Parts Cabinets	S1	S1		
Activity Storage Cabinets (with 50 tote trays)	R1	R1		
Material Storage Cabinets	R1	R1		
Work/Learn (Design) Stations	R20	R20		
24" Stools w/Adjustable Backs	R20	R20		
Wall (Tool) Cabinets	R1	R1		
Mobile Material and Activity Carts with Tote Trays	R4	R4		

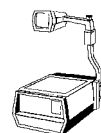
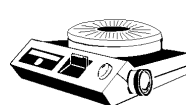
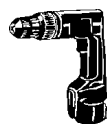
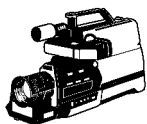


Item	Design Processes	Applications Level Courses		
Portable Wet/Dry Shop Vacs	R2	R1		
Portable Light Tables	R2	R1		
Plastic Tape Labeler	S1	R1		
Filter/Regulator/Lubricators (for compressed air)	R1	R1		
Size/Weight/Vol. Measuring Equip	R1	R1		
Heavy Duty Extension Cords	R4	R4		
Small Modeling Equipment:				
Band Saw	R2	R2		
Scroll Saw	R2	R2		
Drill Press/Drills	R4	R4		
Disc/Belt Sander	R1	R1		
Model Making Tools Sets	R6	R6		
Layout Tools Sets	R6	R6		
Workbench/vises	R4	R4		
Appropriate Safety Equipment	R	R		
Microcomputers	R10	R10		
Internet Connections	R5	R5		
Plotter	R2	R2		
Color InkJet Printer	R4	R6		
Scanners	R2	R4		
Word Processing Software*	R1	R1		
Spread Sheet Software*	R1	R1		
Desktop Publishing Software*	R1	R1		
Sign or Banner Making Software*	R1	R1		
Graphics Software	R1	R1		
Clip Art (Diskette or CD-ROM)*	R1	R1		
Electronic Circuit Design Software*	R1	R1		
CAD Software*	R1	R1		
* required per station				



Item	Design Processes	Applications Level Courses		
Modeling Software*	R1	R1		
Simulation Software (SimCity, SimTower, etc.)*	R1	R1		
Architectural Software*	R1	R1		
Draw Software*	R1	R1		
Dictionary Software*	R1	R1		
Specialty Design Software*	R1	R1		
Styrofoam Cutter	R4	R4		
Photocopier (w/enlargement)	R1	R1		
Slide and Transparency Viewer	R1	R1		
Miscellaneous Hand Tools	R1	R1		
Other _____				

* required per station				



PLANNING NOTES

